

**UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK**

SECURITIES AND EXCHANGE  
COMMISSION,

Plaintiff,

v.

TERRAFORM LABS PTE. LTD. and DO  
HYEONG KWON,

Defendants.

Civil Action No. 23 Civ. 1346 (JSR)

Hon. Jed S. Rakoff

**DECLARATION OF RAJ UNNY  
IN SUPPORT OF DEFENDANTS' MOTION FOR SUMMARY JUDGMENT**

## Table of Contents

I.	Introduction .....	1
II.	Summary of Opinions .....	2
III.	The Blockchain Analysis in Dr. Edman’s Rebuttal Report Only Serves to Highlight the Omissions and Fundamental Flaws in His Opening Report Analysis and Relies on New Arguments .....	5
	A. Dr. Edman Fails to Establish That My Opinions Are Based on Any Alleged Lack of Blockchain Analytics Experience.....	5
	B. Dr. Edman Again Fails to Establish That [REDACTED] and Interprets the Significance of the [REDACTED] Inconsistently as Suits His Arguments .....	7
	C. Dr. Edman Introduces a New Opinion Which Further Undermines His “[REDACTED]” Characterization.....	9
IV.	Dr. Edman’s Arguments Related to [REDACTED] Are Not Relevant as They Rely on Mischaracterizations of the Unny Opening Report and the Materials He Relies Upon ...	10
	A. Dr. Edman’s [REDACTED] Arguments Mischaracterize My Opinion and Testimony .....	10
	B. Dr. Edman’s [REDACTED] Arguments Mischaracterize the Materials He Relies Upon.....	13
V.	Dr. Edman Fails to Address the Narrow Scope of His Analysis as it Relates to the [REDACTED] .....	15
VI.	Dr. Edman’s Definition of [REDACTED] Is Overly Simplistic and Unsupported.....	18
VII.	Dr. Edman’s Analysis and Conclusions Related to the [REDACTED] Highlight the Failures of His Overall Conclusions .....	22

I, Raj Unny, pursuant to 28 U.S.C. § 1746, declare as follows:

**I. Introduction**

1. I previously submitted an expert report in this matter on September 28, 2023 (the “Unny Opening Report” or my “Opening Report”) as a rebuttal to the opinions and analyses put forth in the Corrected Expert Report of Dr. Edman, submitted on September 19, 2023 (“Edman Opening Report”). My assignment was to:

- a. [REDACTED]

2. Dr. Edman has subsequently filed the Rebuttal Report of Dr. Edman (“Edman Rebuttal Report”) on October 13, 2023. I have been asked by counsel for Terraform Labs Pte. Ltd (“Terraform Labs” or “TFL”) and Mr. Do Hyeong Kwon to review and assess the opinions put forward by Dr. Edman in this Rebuttal Report.

3. My qualifications, a list of my prior testimony, and compensation for this matter are detailed in my Opening Report. As discussed in my Opening Report, [REDACTED]

[REDACTED]

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<sup>1</sup> In connection with the allegations put forward by the SEC in its Amended Complaint. *See* Amended Complaint, *Securities and Exchange Commission v. Terraform Labs Pte. Ltd. and Do Hyeong Kwon*, April 3, 2023.

<sup>2</sup> Corrected Expert Report of Dr. Matthew J. Edman, September 19, 2023 (“Edman Opening Report”), ¶ 70.

[REDACTED]

4. A list of the documents that I have considered in forming my opinions is attached to this declaration as Appendix A. The opinions presented in this declaration are the result of the information currently available to me. I reserve the right to revise my opinions in light of any additional materials, including data, documents, and depositions or other testimony that may subsequently come to light, or if I am asked to perform further research or analysis.

## II. Summary of Opinions

5. Nothing in the Edman Rebuttal Report changes my opinions from my Opening Report. In particular, based on my experience, expertise, review of the evidence in this matter, and analysis of the Edman Rebuttal Report, I have reached the following conclusions:

- a. [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED] His arguments do not change my opinion that:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>3</sup>

- b. Dr. Edman's arguments related to [REDACTED]
- [REDACTED]
- [REDACTED] His arguments do not change my opinion that:

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<sup>3</sup> Expert Report of Mr. Raj Unny, September 28, 2023 ("Unny Opening Report"), ¶ 11 quoting Edman Opening Report, ¶¶ 66, 70.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>4</sup>

- c. Dr. Edman asserts that [REDACTED]  
[REDACTED].<sup>5</sup> However, he himself demonstrates his awareness of the existence of [REDACTED]  
[REDACTED]  
[REDACTED] in his Opening Report. Further, Dr. Edman acknowledges his agreement with my findings that [REDACTED]  
[REDACTED]  
[REDACTED]. Yet, he continues to claim there are no shortcomings in his evaluation of [REDACTED]  
[REDACTED] when reaching conclusions of [REDACTED]  
[REDACTED]. As such, his assertions do not change my opinion that:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>6</sup>

<sup>4</sup> Unny Opening Report, ¶ 48.

<sup>5</sup> Rebuttal Expert Report of Dr. Matthew J. Edman, October 13, 2023 (“Edman Rebuttal Report”), ¶ 7.

<sup>6</sup> Unny Opening Report, ¶ 11.

- d. In his Rebuttal Report, Dr. Edman relies on [REDACTED] [REDACTED] that too was only *after* he was pressed to do so in his deposition. He uses this to argue that I [REDACTED]  
[REDACTED]  
[REDACTED]<sup>7</sup> His [REDACTED]  
[REDACTED]  
[REDACTED]. Thus, it in no way changes my opinion that:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>8</sup> and  
  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>9</sup>

- e. Dr. Edman's new conclusions in his Rebuttal Report related to [REDACTED] contain several shortcomings and raise points undermining his Opening Report opinions and methodology. In particular, Dr. Edman appears to relax requirements related to [REDACTED] [REDACTED] as it suits his opinion. His arguments related to the [REDACTED] are also irrelevant and obfuscate the fact that he did not do sufficient analysis to support the broad conclusions in his Opening Report. Furthermore, his argument that [REDACTED]  
[REDACTED]  
[REDACTED]

<sup>7</sup> Edman Rebuttal Report, ¶ 8.

<sup>8</sup> Unny Opening Report, ¶ 32 quoting Edman Opening Report, ¶¶ 10–11.

<sup>9</sup> Unny Opening Report, ¶ 11 quoting Edman Opening Report, ¶¶ 11, 70.

[REDACTED]. Thus,  
nothing in Dr. Edman's arguments changes my opinion that:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>10</sup>

**III. The Blockchain Analysis in Dr. Edman's Rebuttal Report Only Serves to Highlight the Omissions and Fundamental Flaws in His Opening Report Analysis and Relies on New Arguments**

6. In Section III of his Rebuttal Report, Dr. Edman seeks to u [REDACTED]  
[REDACTED]. However, he fails to identify where [REDACTED]  
[REDACTED]. Furthermore, [REDACTED]  
[REDACTED]. It also demonstrates the fundamental flaws  
with his conclusions of [REDACTED]. Finally, Section III of Edman's Rebuttal Report  
includes [REDACTED] that was not offered by Dr. Edman in his Opening Report.

**A. Dr. Edman Fails to Establish That My Opinions Are Based on Any Alleged Lack of Blockchain Analytics Experience**

7. Dr. Edman seeks to [REDACTED]  
[REDACTED]. I do not find his support for this claim compelling, especially  
given that his blockchain analysis confirms [REDACTED]  
[REDACTED] in my Opening Report that the Edman  
Opening Report included meaningful omissions.

8. Dr. Edman attempts to support his claims about [REDACTED]  
[REDACTED]

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<sup>10</sup> Unny Opening Report, ¶ 11.

[REDACTED].<sup>11</sup> In response, I first note the following:

- a. The blockchain analysis credentials and training that Dr. Edman has received can be completed in five days, and therefore I would question using this as a measure of expertise in comparison to industry experience such as that outlined in Appendix A of my report.<sup>12</sup>
- b. As noted at the outset of my report, I am evaluating Dr. Edman's analysis not putting forward a new analysis.<sup>13</sup>
- c. My blockchain experience, detailed in my Opening Report, more than qualifies me to review and opine on Dr. Edman's analysis.<sup>14</sup>

9. More importantly, Dr. Edman goes on to confirm [REDACTED]

[REDACTED]:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>15</sup>

Thus, it is not clear why Dr. Edman states my "[REDACTED]  
[REDACTED]" given I was the first to provide the same factual findings regarding [REDACTED].<sup>16</sup>

<sup>11</sup> Edman Rebuttal Report, ¶ 11.

<sup>12</sup> See Edman Opening Report, Exhibit 1.

[REDACTED] The course work offered by Chainalysis [REDACTED] can be completed in five days total (assuming a prerequisite three months experience with the Chainalysis Reactor software for one of the courses). See "Chainalysis Academy," *Chainalysis*, available at <https://academy.chainalysis.com/>. Further, Dr. Edman provided no production materials or analyses in his Opening Report or Rebuttal Report indicating [REDACTED].

<sup>13</sup> Unny Opening Report, ¶ 10.

<sup>14</sup> See ¶ 3 above, Unny Opening Report, ¶¶ 5–6, and Unny Opening Report Appendix A for a detailed discussion of my blockchain experience.

<sup>15</sup> Edman Rebuttal Report, ¶ 15.

<sup>16</sup> Edman Rebuttal Report, ¶ 12.



10. Furthermore, by his own analysis of [REDACTED] in his Rebuttal Report, Dr. Edman demonstrates—as argued in my Opening Report—[REDACTED] were, in fact, relevant to his Opening Report opinions but [REDACTED]. It is only after I drew explicit attention to [REDACTED] [REDACTED]<sup>17</sup> that Dr. Edman undertook [REDACTED] in his Rebuttal Report to support his new claim [REDACTED] [REDACTED].” However, he had provided no such [REDACTED] in his Opening Report, when it is clear it would have been necessary to do so before making the assertion he includes in his Opening Report that [REDACTED] [REDACTED].<sup>18</sup>

**B. Dr. Edman Again Fails to Establish That [REDACTED]  
[REDACTED] Inconsistently as Suits His Arguments**

11. As mentioned in Section III.A., in his Rebuttal Report, Dr. Edman attempts to address a gap in his Opening Report regarding [REDACTED] [REDACTED]<sup>19</sup> He attempts to establish that [REDACTED]. He has not been able [REDACTED] [REDACTED].

12. Consistent with my findings, Dr. Edman identifies [REDACTED] [REDACTED]. Dr. Edman describes [REDACTED] [REDACTED]<sup>20</sup> Dr. Edman goes on to state the following opinion regarding [REDACTED]:

<sup>17</sup> Unny Opening Report, ¶ 58.

<sup>18</sup> Edman Opening Report, ¶ 66 (“[REDACTED]”).

<sup>19</sup> Edman Rebuttal Report, ¶ 5.

<sup>20</sup> Edman Rebuttal Report, ¶ 18.

[REDACTED]  
[REDACTED]<sup>21</sup>

13. In defining [REDACTED]  
[REDACTED], Dr. Edman is acknowledging that [REDACTED]  
[REDACTED]<sup>22</sup> Despite this fact, when describing [REDACTED] [REDACTED] Dr.  
Edman conveniently attributes [REDACTED]  
[REDACTED]

14. In notable contrast, when describing [REDACTED] [REDACTED]  
Dr. Edman applies different criteria. Consider Dr. Edman’s opinion from his Opening Report  
where [REDACTED]:

[REDACTED]  
[REDACTED]  
[REDACTED]<sup>23</sup>

15. Both [REDACTED]  
[REDACTED], but Dr. Edman *changes* his methodology in order to reach different conclusions,  
revealing that he has not consistently applied either methodology. When Dr. Edman analyzes  
[REDACTED]  
[REDACTED]  
[REDACTED]. In this case he  
speculates that [REDACTED]  
[REDACTED]<sup>24</sup>

16. However, when Dr. Edman sees activity from [REDACTED]  
[REDACTED]

<sup>21</sup> Edman Rebuttal Report, ¶ 21.

<sup>22</sup> Edman Rebuttal Report, ¶¶ 19–21. Dr. Edman does not [REDACTED]  
[REDACTED]. *See also* “The Omnibus Model  
for Custody,” *Fidelity Digital Assets*, January 21, 2020, available at  
<https://www.fidelitydigitalassets.com/research-and-insights/omnibus-model-custody>.

<sup>23</sup> Edman Opening Report, ¶ 11.

<sup>24</sup> Edman Rebuttal Report, ¶¶ 17–21.

[REDACTED] Instead, he claims that [REDACTED]

[REDACTED] In this way, Dr. Edman's assignment of [REDACTED]

17. Furthermore, Dr. Edman's opinion and explanation is speculative. Dr. Edman argues that that [REDACTED]

[REDACTED] However, he does not provide any clear evidence as to why [REDACTED]

[REDACTED] It seems that Dr. Edman is also not convinced by this explanation as he only claims that [REDACTED]

[REDACTED]<sup>25</sup> Thus, he still cannot conclusively state that [REDACTED]

**C. Dr. Edman Introduces a New Opinion Which Further Undermines His [REDACTED] Characterization**

18. Dr. Edman introduces a new opinion to explain t [REDACTED]

[REDACTED]. He argues that [REDACTED]  
[REDACTED]:

[REDACTED]  
[REDACTED]<sup>26</sup>

19. Dr. Edman does not put forward this opinion in his Opening Report. In fact, in his Opening Report he describes [REDACTED]

[REDACTED]<sup>27</sup> However, in his Rebuttal Report, Dr. Edman now describes [REDACTED]

<sup>25</sup> Edman Rebuttal Report, ¶ 21 (emphasis added).

<sup>26</sup> Edman Rebuttal Report, ¶¶ 25–26.

<sup>27</sup> Edman Opening Report, ¶ 66.

[REDACTED]<sup>28</sup>—a [REDACTED]  
[REDACTED]  
[REDACTED]. Dr. Edman further indicates this [REDACTED]  
[REDACTED].<sup>29</sup> Thus,  
this is an additional notable shift in Dr. Edman’s description of [REDACTED]  
[REDACTED].

20. Dr. Edman attempts to further support this opinion by referencing [REDACTED]  
[REDACTED].<sup>30</sup> His  
interpretations of [REDACTED]  
[REDACTED]. However, even assuming that his interpretation of [REDACTED] is correct, he  
does not suggest that [REDACTED]  
[REDACTED].

#### **IV. Dr. Edman’s Arguments Related to [REDACTED] Are Not Relevant as They Rely on Mischaracterizations of the Unny Opening Report and the Materials He Relies Upon**

21. In Section IV of his Rebuttal Report, Dr. Edman makes several arguments related to [REDACTED] that wholly rely on a mischaracterization of both my opinion, my testimony, and documentation that he relies upon.

##### **A. Dr. Edman’s [REDACTED] Arguments Mischaracterize My Opinion and Testimony**

22. Dr. Edman argues that “[REDACTED]  
[REDACTED]”<sup>31</sup> Based on this, Dr. Edman  
states that [REDACTED]  
[REDACTED]

<sup>28</sup> See Edman Opening Report, Exhibit 64; Edman Rebuttal Report, Exhibit 7. [REDACTED]  
[REDACTED].

<sup>29</sup> Edman Rebuttal Report, ¶ 26.

<sup>30</sup> Edman Rebuttal Report, ¶¶ 27–28.

<sup>31</sup> Edman Rebuttal Report, ¶ 6.

[REDACTED]<sup>32</sup> He continues by arguing that [REDACTED]  
[REDACTED]<sup>33</sup>

23. Notably, however, Dr. Edman’s entire argument rests on his mischaracterization of my opinion. I have not stated that [REDACTED]  
[REDACTED]. Instead, in my report I focused on Dr. Edman’s [REDACTED]  
[REDACTED] specifically stating the following:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>34</sup>

24. It is *Dr. Edman* who has put forward the argument that [REDACTED]  
[REDACTED]  
[REDACTED]<sup>35</sup> Section V.C. in my Opening Report simply highlights that a system [REDACTED]  
[REDACTED]  
[REDACTED]. As discussed in that section,  
[REDACTED]<sup>36</sup> Thus, my argument is  
simply that [REDACTED]  
[REDACTED].

25. During my deposition, the SEC similarly attempted to mischaracterize my opinion in this way. However, during this line of questioning, I pointed out [REDACTED]  
[REDACTED]:

<sup>32</sup> Edman Rebuttal Report, ¶ 31.

<sup>33</sup> Edman Rebuttal Report, ¶ 32.

<sup>34</sup> Unny Opening Report, ¶ 48 (emphasis added).

<sup>35</sup> Edman Opening Report, ¶ 11.

<sup>36</sup> Unny Opening Report, ¶¶ 49–50.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>37</sup>

26. Dr. Edman makes additional arguments in this section to try to undermine my arguments.

For example, he argues [REDACTED]

[REDACTED]

[REDACTED]<sup>38</sup> He further opines that prior [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>39</sup> Both of these points again seek to rebut a mischaracterization of my opinion that [REDACTED]

[REDACTED].

27. More importantly, for the reasons outlined in Sections V.A. and V.B. of my Opening Report, and as I repeatedly stated in my testimony, I would argue that it is speculative to try to infer [REDACTED]

[REDACTED]<sup>40</sup>

28. During my deposition, [REDACTED]

[REDACTED] I responded “[REDACTED]

[REDACTED]

---

<sup>37</sup> Deposition of Mr. Raj Unny, October 9, 2023 (“Unny Deposition”), pp. 153:14–154:17.

<sup>38</sup> Edman Rebuttal Report, ¶ 35.

<sup>39</sup> Edman Rebuttal Report, ¶ 35.

<sup>40</sup> While Dr. Edman adds that [REDACTED] (See Edman Rebuttal Report, ¶¶ 47, 55), [REDACTED]

[REDACTED].

[REDACTED]  
[REDACTED]  
[REDACTED]<sup>41</sup>

**B. Dr. Edman's [REDACTED] Arguments Mischaracterize the Materials He Relies Upon**

29. Dr. Edman argues that [REDACTED]  
[REDACTED]  
[REDACTED]<sup>42</sup> He points to the following documents and testimony:

- a. [REDACTED]  
[REDACTED]<sup>43</sup>
- b. [REDACTED]  
[REDACTED]  
[REDACTED]<sup>44</sup>
- c. [REDACTED]  
[REDACTED]  
[REDACTED]<sup>45</sup>

30. First, none of these quotes clarify [REDACTED]  
[REDACTED]. [REDACTED]  
[REDACTED]. Furthermore, it is not relevant to the core position of my opinion that Dr. Edman's characterization of [REDACTED]  
[REDACTED]. Thus, [REDACTED]  
[REDACTED]  
[REDACTED]<sup>46</sup>

<sup>41</sup> Unny Deposition, p. 155:6–15.

<sup>42</sup> Edman Rebuttal Report, ¶ 6.

<sup>43</sup> Edman Rebuttal Report, ¶ 37.

<sup>44</sup> Edman Rebuttal Report, ¶ 37.

<sup>45</sup> Edman Rebuttal Report, ¶ 37.

<sup>46</sup> Edman Opening Report, ¶ 11.

31. Second, there are potential concerns around the reliability of the documents Dr. Edman cites. [REDACTED]

32. For example, while t [REDACTED]  
[REDACTED]  
[REDACTED] and [REDACTED] this statement seems inconsistent with and difficult to fully reconcile [REDACTED] (which Dr. Edman does not mention):

[REDACTED]

[REDACTED]<sup>47</sup>

33. Based on this, there are clear internal contradictions between Dr. Edman's source documents. In addition, Dr. Edman cannot [REDACTED]

[REDACTED]  
[REDACTED]<sup>48</sup>

34. Third, Dr. Edman continues in his repeated practice of cherry-picking and mischaracterizing statements by ignoring [REDACTED]  
[REDACTED]. Specifically, Dr. Edman ignores that [REDACTED]  
[REDACTED]. For instance, only a few lines after Dr. Edman's quoted statement, [REDACTED]:

[REDACTED]

[REDACTED]

[REDACTED]<sup>49</sup>

<sup>47</sup>

<sup>48</sup>

For example, it is difficult to know what precisely is meant in the email when it says C [REDACTED]

This could mean t [REDACTED]

<sup>49</sup>



[illegible]

36. Furthermore, [REDACTED]  
[REDACTED]:

51

37. Several questions later [REDACTED]  
[REDACTED] .52

**V. Dr. Edman Fails to Address the Narrow Scope of His Analysis as it Relates to the**  
[REDACTED]

38. In Section V of Dr. Edman's Rebuttal Report, he asserts that I provide "[REDACTED]"  
[REDACTED]  
[REDACTED]  
[REDACTED]"<sup>53</sup> Furthermore, he states that I "[REDACTED]"  
[REDACTED]"<sup>54</sup> These

50 [REDACTED]  
51 [REDACTED]  
52 [REDACTED]

<sup>54</sup> Edman Rebuttal Report, Section V.

assertions are false, contradict facts relied on by Dr. Edman in his Opening Report, and are a misrepresentation of what is necessary to support my opinion.

39. First, I clearly establish [REDACTED]

[REDACTED] in Section V.A. of my report where I establish that [REDACTED]

[REDACTED]<sup>55</sup> I go on to explain that from these characteristics of [REDACTED]

[REDACTED]:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>56</sup>

40. It is important to note that Dr. Edman does not seek to rebut these claims, as he agreed in his deposition that [REDACTED]

[REDACTED]<sup>57</sup> It is the fact that [REDACTED]

[REDACTED]

[REDACTED].

41. Second, Dr. Edman himself establishes his understanding of the existence of “[REDACTED]

[REDACTED] [REDACTED]

[REDACTED]

[REDACTED]<sup>59</sup> PayPal, as the largest payment application in the world by market share,<sup>60</sup> provides a familiar user experience that is supported by numerous technical systems such as: a web and mobile application, gateways that allow users to link to their banks and credit cards, and

<sup>55</sup> Unny Opening Report, ¶¶ 36–37.

<sup>56</sup> Unny Opening Report, ¶ 38.

<sup>57</sup> Deposition of Dr. Matthew J. Edman, September 20, 2023 (“Edman Deposition”), p. 132:3–4.

<sup>58</sup> Edman Rebuttal Report, Section V.

<sup>59</sup> Edman Opening Report, ¶ 26.

<sup>60</sup> “Market share of online payment processing technologies worldwide as of July 2023,” Statista, available at <https://www.statista.com/statistics/895236/australia-market-share-online-payment-platforms/>.

protocols that allow users to securely send and receive funds.<sup>61</sup> Therefore, in describing [REDACTED]

[REDACTED]<sup>62</sup> [REDACTED]

42. At a minimum, Dr. Edman should understand that [REDACTED]

Furthermore, Dr. Edman must concede the possibility that [REDACTED]

43. Thus, Dr. Edman's opinions about the [REDACTED]

[REDACTED].<sup>63</sup> Further, he also admits

that the [REDACTED]<sup>64</sup> Yet, he also claims that [REDACTED]

[REDACTED]<sup>65</sup> He does this without a sufficient review or even meaningful inquiry of [REDACTED] to [REDACTED] [REDACTED], nor does he provide sufficient evidence to establish that [REDACTED].

44. In my report, I note the failure in Dr. Edman's logic and highlight where Dr. Edman is missing critical information to support his conclusions. It is exactly this void in Dr. Edman's analysis that necessitates the introduction of the concepts of [REDACTED]"

<sup>61</sup> "Send money at the speed of life," *PayPal*, available at <https://www.paypal.com/uk/digital-wallet/send-receive-money/send-money>; "How do I link a bank account to my PayPal account?," *PayPal*, available at <https://www.paypal.com/us/cshelp/article/how-do-i-link-a-bank-account-to-my-paypal-account-help183>; "PayPal security guidelines and best practices," *PayPal Developer*, available at <https://developer.paypal.com/api/rest/reference/info-security-guidelines/>.

<sup>62</sup> Edman Rebuttal Report, Section V.

<sup>63</sup> Edman Deposition, p. 132:3–4.

<sup>64</sup> Edman Opening Report, ¶ 42.

<sup>65</sup> Edman Opening Report, ¶ 11.

and the [REDACTED] as I do in the opening section of my report:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] 66

45. Therefore, it is Dr. Edman who should have provided a thorough analysis [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>67</sup> before he  
offered broad conclusions about the [REDACTED]  
[REDACTED].<sup>68</sup>

## VI. Dr. Edman's Definition of [REDACTED] Is Overly Simplistic and Unsupported

46. In Section VI of his Rebuttal Report, Dr. Edman belatedly argues he has [REDACTED]  
[REDACTED]. However, he only did so  
after including no such opinion in his Opening Report. In response to the question [REDACTED]  
[REDACTED]

<sup>66</sup> Unny Opening Report, ¶ 11.

<sup>67</sup> Edman Rebuttal Report, ¶ 41 (emphasis in original).

<sup>68</sup> Indeed, Dr. Edman did not even bother to

See Unny Opening Report, ¶ 45, n. 83; TFL\_SEC\_00223957; Official Korean to English Translation of TFL\_SEC\_00223957, File “EACCTRL00206471 EN.docx”.

Dr. Edman states in his deposition that he [REDACTED]

[REDACTED]<sup>69</sup> Notably, he did not provide any [REDACTED]

[REDACTED] in his Opening Report.<sup>70</sup>

47. In his Rebuttal Report, Dr. Edman uses [REDACTED] in the body of the report: [REDACTED]

[REDACTED]<sup>71</sup> [REDACTED]

48. First, Dr. Edman's [REDACTED]

[REDACTED] Moreover, he does not provide any explanation of [REDACTED]

[REDACTED] Nor does he provide any explanation of [REDACTED]

[REDACTED] His [REDACTED]

[REDACTED]. As discussed in my Opening Report and below, [REDACTED].

49. Second, by presenting [REDACTED]

[REDACTED], Dr. Edman completely ignores the fact that [REDACTED]

[REDACTED] leading

organizations such as the Committee on Payments and Market Infrastructure (CPMI), the International Monetary Fund (IMF), and the European Central Bank (ECB). Articles written by industry professionals similarly illustrate [REDACTED]

- a. [REDACTED] the CPMI, which is considered a global standard setting body in payments,<sup>72</sup> states that "DLT [distributed ledger

<sup>69</sup> Edman Deposition, pp. 198:22–199:3.

<sup>70</sup> As noted in my Opening Report, [REDACTED] See Unny Opening Report, ¶ 54.

<sup>71</sup> Edman Rebuttal Report, ¶ 52.

<sup>72</sup> See "CPMI – overview," *Bank of International Settlements*, available at <https://www.bis.org/cpmi/about/overview.htm>. For example, the Bank of Korea has recently announced that it will adopt a recent set of standards published by the CPMI. See "BIS CPMI publishes 'Harmonised ISO 20022 Data Requirements for Enhancing Cross-border Payments,'" *Bank of Korea*, October 18, 2023, available at <https://www.bok.or.kr/eng/bbs/E0000634/view.do?nttId=10080032&menuNo=400069>.

technology] arrangements vary significantly based on their functionality, nature of service, design, technology and processes. In order to analyse these types of arrangement[s], it is useful to apply a structured approach to understand the functionality and nature of a given service, and the key factors for its effective implementation.”<sup>73</sup>

- b. An IMF report discussing the potential for digital money highlights [REDACTED] in very simple terms: “‘How much for your coffee?’ 1 euro, a dollar, 10 yuan . . . Whatever the price, we might pull out local notes and coins to settle the bill. Or we might swipe a card or wave our phone and walk away just as reassured that the coffee was paid for. Someone watching from another century would think it were magic. Indeed, it nearly is. *The steps, hidden from view, are extraordinarily complex, involving information exchange, legal and regulatory structures, as well as back-end settlement of funds.* And yet, we think nothing of it.”<sup>74</sup>
- c. The European Central Bank (ECB) similarly [REDACTED]. The ECB defines processing as “the performance of all of the actions required in accordance with the rules of a system for the handling of a transfer order from the point of acceptance by the system to the point of discharge from the system. Processing may include clearing, sorting, netting, matching and/or settlement.”<sup>75</sup> It separately defines settlement as “the completion of a transaction or of processing with the aim of discharging participants’ obligations through the transfer of funds and/or securities. A settlement may be final or provisional.”<sup>76</sup> Notably, Dr. Edman’s

<sup>73</sup> “Distributed ledger technology in payment, clearing and settlement,” *Bank for International Settlements*, February 2017, available at <https://www.bis.org/cpmi/publ/d157.pdf>, p. 10.

<sup>74</sup> Adrian, Tobias and Tommaso Mancini-Griffoli, “The Rise of Digital Money,” *IMF*, July 2019, available at <https://www.imf.org/en/Publications/fintech-notes/Issues/2019/07/12/The-Rise-of-Digital-Money-47097>, p. 2 (emphasis added).

<sup>75</sup> “Glossary of Terms Related to Payment, Clearing and Settlement Systems,” *European Central Bank*, December 2009, available at [https://www.ecb.europa.eu/pub/pdf/other/glossaryrelatedtopaymentclearingandsettlementsystems\\_en.pdf](https://www.ecb.europa.eu/pub/pdf/other/glossaryrelatedtopaymentclearingandsettlementsystems_en.pdf) (“ECB Glossary”), p. 22.

<sup>76</sup> ECB Glossary, p. 24.

simplistic definition [REDACTED]

- d. In an article titled “Payments Are Far More Complicated Than You Think,” written for Forbes, a former Head of Global Product Operations on the Money Team at Uber, writes the following about her experience working on issues related to payment processing at Uber:<sup>77</sup> “While clicking a button in an app to transfer money seems simple, there were layers of complexity and technology behind the scenes. Uber partnered with a bank to enable drivers to sign up for a free bank account, requiring complex partnership agreements, driver identity verification and system implementations. Then, the bank integrated with payment processors and networks to process the payments via API call — instead of the old way of processing a weekly driver payment, which was to upload a file to a bank portal.”<sup>78</sup>

50. Finally, [REDACTED]

- a. Again, the CPMI report was written in order to “provide[] an analytical framework for central banks and other authorities to review and analyse the use of this technology for payment, clearing and settlement.”<sup>79</sup>
- b. Similarly, the United States Federal Reserve has outlined a framework for understanding how DLT arrangements support payment systems. As an example, in this report the Fed highlights the potential for a range of DLT arrangements in payments including arrangements that leverage DLT through existing traditional payment infrastructures. “Although the technology has the potential to provide a

<sup>77</sup> Barr Allen, Allison, “Payments Are Far More Complicated Than You Think,” *Forbes*, June 30, 2020, available at <https://www.forbes.com/sites/forbestechcouncil/2020/06/30/payments-are-far-more-complicated-than-you-think/?sh=8de7e764fc6b>; Li, Jess, “An Interview with Allison Barr Allen, Head of Global Product Operations on the Money Team at Uber,” *Medium*, July 18, 2019, available at <https://medium.com/elpha-conversations/an-interview-with-allison-barr-allen-head-of-global-product-operations-on-the-money-team-at-uber-7549c014c6be>.

<sup>78</sup> Barr Allen, Allison, “Payments Are Far More Complicated Than You Think,” *Forbes*, June 30, 2020.

<sup>79</sup> “Distributed ledger technology in payment, clearing and settlement,” *Bank for International Settlements*, February 2017, available at <https://www.bis.org/cpmi/publ/d157.pdf>, p. iii.

new way of storing, recording, and transferring digital assets, at present most industry participants are looking at ways to integrate the technology into existing systems and institutions. *Many models may alter or eliminate some roles of current intermediaries in payments, clearing, and settlement but may not necessarily eliminate the need for coordination or centralization of certain functions by trusted intermediaries. These trusted intermediaries could still be needed to play important roles in addressing frictions beyond what DLT may be able to accomplish or may be able to use DLT arrangements to improve or evolve how they accomplish their respective missions.*”<sup>80</sup>

## **VII. Dr. Edman’s Analysis and Conclusions Related to [REDACTED] Highlight the Failures of His Overall Conclusions**

51. Dr. Edman’s arguments in Section VII of his Rebuttal Report contain several shortcomings and raise points that undermine his opinions:

- a. In his assessment of [REDACTED], Dr. Edman adopts different, more lenient criteria from his Opening Report when determining a [REDACTED]  
[REDACTED].
- b. Dr. Edman tries to minimize the scope of [REDACTED] but this does not alter his fundamental failure to [REDACTED] in his Opening Report.
- c. Dr. Edman points to [REDACTED]. However, it was not incumbent upon me to perform these for my assignment, which again was to [REDACTED]  
[REDACTED]. Instead, it would have been [REDACTED]  
[REDACTED].

<sup>80</sup> Mills, David, et al., “Distributed ledger technology in payments, clearing, and settlement,” *Federal Reserve*, December 2016, available at <https://www.federalreserve.gov/econresdata/feds/2016/files/2016095pap.pdf> (emphasis added).



52. Dr. Edman meaningfully revises and relaxes his previously established criteria for a [REDACTED] from his Opening Report. Throughout his Opening Report, Dr. Edman placed repeated emphasis on [REDACTED]. This was seemingly a critical part of his characterization of [REDACTED] [REDACTED] [REDACTED].

53. He states at the beginning of his Opening Report:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>81</sup>

54. Later, he goes on to reiterate:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>82</sup>

55. Finally, he draws the closing conclusion of his report as follows in the last paragraph:

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>83</sup>

56. However, in his Rebuttal Report, Dr. Edman significantly [REDACTED] [REDACTED] [REDACTED] Rather than requiring the [REDACTED] [REDACTED]. Specifically, to

<sup>81</sup> Edman Opening Report, ¶ 11 (emphasis added).

<sup>82</sup> Edman Opening Report, ¶ 66 (emphasis added).

<sup>83</sup> Edman Opening Report, ¶ 70 (emphasis added).

accommodate [REDACTED], Dr. Edman puts forward in his Rebuttal Report [REDACTED] [REDACTED]:

[REDACTED]  
[REDACTED]  
[REDACTED]<sup>84</sup>

57. It is notable the degree to which Dr. Edman seems comfortable [REDACTED]

[REDACTED] Suddenly, when characterizing [REDACTED] in his Rebuttal Report, Dr. Edman seems [REDACTED]

58. Importantly, [REDACTED] [REDACTED]. For example, the aforementioned [REDACTED] which Dr. Edman focuses on [REDACTED]

[REDACTED] that Dr. Edman performed for his Opening Report.<sup>85</sup>

59. Further, Dr. Edman himself acknowledges in his Rebuttal Report that [REDACTED]

[REDACTED]<sup>86</sup> Thus, Dr. Edman seems to recognize that [REDACTED] [REDACTED]. By extension, he should recognize [REDACTED]

60. Separately, concerning Dr. Edman's attempts to [REDACTED] [REDACTED]

<sup>84</sup> Edman Rebuttal Report, ¶ 65 (emphasis added).

<sup>85</sup> The [REDACTED] [REDACTED]. See Edman Rebuttal Report, ¶ 65, n. 25. This [REDACTED] (See Edman Opening Report, ¶ 57), nor does it appear in Exhibit 64 (TFL SEC 00242122.xlsx) of Dr. Edman's Opening Report, [REDACTED].

<sup>86</sup> Edman Rebuttal Report, ¶ 63.

a.

[REDACTED]

[REDACTED]<sup>87</sup>

b.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>88</sup>

61. Dr. Edman seems eager to highlight [REDACTED].

However, this does not change the fact that Dr. Edman [REDACTED]

[REDACTED]

[REDACTED] confirmed by Dr. Edman's own eventual findings in his Rebuttal Report, as explained above. Notably, he only pursued this analysis when pressed to do so, [REDACTED] in my Opening Report.

62. Dr. Edman also seems eager to [REDACTED]

[REDACTED] These include statements such as:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>89</sup>

63. Dr. Edman seemingly neglects, however, that my assignment was to:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>90</sup>

<sup>87</sup> Edman Rebuttal Report, ¶ 60.

<sup>88</sup> Edman Rebuttal Report, ¶ 64.

<sup>89</sup> Edman Rebuttal Report, ¶ 59.

<sup>90</sup> Unny Opening Report, ¶ 10.

64. [REDACTED]  
[REDACTED]  
[REDACTED] Dr. Edman's

statements therefore only serve as reminder of [REDACTED], and in particular, support my opinion that "[REDACTED]"  
[REDACTED]<sup>91</sup>

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on October 27, 2023 in Zug, Switzerland,

*Raj Unny*

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Raj Unny

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<sup>91</sup> Unny Opening Report, ¶ 11.